

12 11. (a)

$$\frac{\phi^0}{\phi} = 1 + \frac{k_q[Q]}{k_r}$$

that is, slope is inversely proportional to k_r .

basis
(8)

$$(\text{slope})_a = \left(\frac{k_q}{k_r} \right)_a = 5 (\text{slope})_b = 5 \left(\frac{k_q}{k_r} \right)_b$$

your's

$$\frac{k_q}{k_r^a}$$

$$= 5 \left(\frac{k_q}{k_r^b} \right)$$

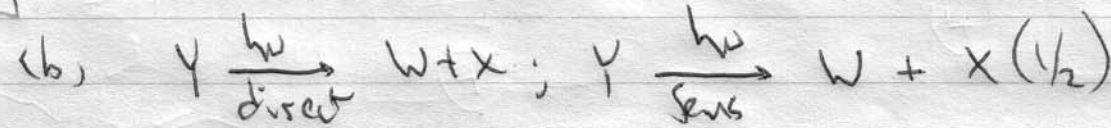
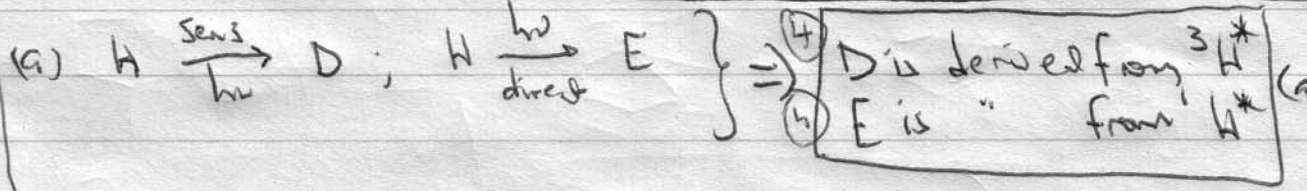
your's

$$\frac{k_q}{k_r^a} = 5 \frac{k_q}{k_r^b} \Rightarrow \frac{1}{k_r^a} = \frac{5}{k_r^b} \Rightarrow k_r^a = \frac{k_r^b}{5}$$

$\Rightarrow$ Slower (lower)

(b) $k_r^a = \frac{10}{5} \times 10^7 = 2 \times 10^7 \text{ s}^{-1} = k_r^a$

12. 20



$\Rightarrow$ W is from ${}^3Y^*$ while $1/2 X$ from Y^* i.e. $1/2 {}^3Y^*$

on
prof.
Set!

